

Saxifraga michauxii - *Carex misera* - *Calamagrostis cainii* Herbaceous Vegetation

COMMON NAME	Cliff Saxifrage - Wretched Sedge - Cain Reedgrass Herbaceous Vegetation
SYNONYM	Southern Appalachian High Elevation Rocky Summit (Anakeesta Type)
PHYSIOGNOMIC CLASS	Herbaceous Vegetation (V)
PHYSIOGNOMIC SUBCLASS	Perennial forb vegetation (V.B)
PHYSIOGNOMIC GROUP	Temperate or subpolar perennial forb vegetation (V.B.2)
PHYSIOGNOMIC SUBGROUP	Natural/Semi-natural (V.B.2.N)
FORMATION	Low temperate or subpolar perennial forb vegetation (V.B.2.N.b)

ALLIANCE *Saxifraga michauxii* Herbaceous Alliance

CLASSIFICATION CONFIDENCE LEVEL 1

USFWS WETLAND SYSTEM Upland

RANGE

Globally

This community is known from the Great Smoky Mountains of Tennessee.

Great Smoky Mountains National Park

This community does not occur on the Cades Cove quadrangle. This community was sampled or observed on the Mount Le Conte quadrangle on the high slopes and summits of Mount Le Conte and in the vicinity of Mount Kephart.

ENVIRONMENTAL DESCRIPTION

Globally

This community occurs on high elevation landslide scars, cliffs, rock outcrops, and summits. Slopes can be extremely steep (landslide scars and cliffs) or relatively flat (summits and ledges). This community occurs mostly above 6000 feet elevation but can occur as low as 4500 feet. This community is most often associated with exposed outcrops of felsic Anakeesta slate in the Great Smoky Mountains.

Great Smoky Mountains National Park

See above

MOST ABUNDANT SPECIES

Globally

Stratum

Short shrub
Herbaceous

Species

Diervilla sessilifolia, *Rhododendron carolinianum*, *Rubus canadensis*
Rock, *Carex debilis*, *Carex misera*, *Saxifraga michauxii*

Great Smoky Mountains National Park

Stratum

See above

Species

CHARACTERISTIC SPECIES

Globally

Abies fraseri, *Aster acuminatus*, *Calamagrostis cainii*, *Carex misera*, *Diervilla sessilifolia*, *Leiophyllum buxifolium*, *Rhododendron carolinianum*, *Saxifraga michauxii*, *Solidago glomerata*, *Vaccinium erythrocarpum*

Great Smoky Mountains National Park

See above

VEGETATION DESCRIPTION

Globally

This community has very sparse to moderate vegetative cover made up of grasses, forbs and shrubs rooted in rock fissures. These extreme habitats may have up to 80 percent exposed bedrock and talus and often have seepage inclusions. Occurrences can range in size from 25 square meters to over an acre. Composition and vegetative coverage vary from site to site, but common dominants include the herbs *Calamagrostis cainii*, *Carex debilis*, *Carex misera*, and *Saxifraga michauxii*, and the shrubs *Diervilla sessilifolia*, *Rhododendron carolinianum*, and *Rubus canadensis*. Other typical species include *Ageratina altissima* var. *roanensis*, *Aster acuminatus*, *Athyrium filix-femina*, *Danthonia compressa*, *Dennstaedtia campyloptera*, *Gentiana linearis*,

Rugelia nudicaulis, *Saxifraga michauxii*, and *Solidago glomerata*. Other woody species found in this community include *Abies fraseri*, *Betula alleghaniensis*, *Picea rubens*, *Leiophyllum buxifolium*, *Menziesia pilosa*, *Prunus pensylvanica*, *Rhododendron catawbiense*, *Sorbus americana*, and *Vaccinium erythrocarpum*. This community occurs in a matrix with *Picea rubens* - *Abies fraseri* Forest.

Great Smoky Mountains National Park

See above

OTHER NOTEWORTHY SPECIES

No information

CONSERVATION RANK G1

RANK JUSTIFICATION

This rock outcrop community is known only from outcrops of Anakeesta slate in the Great Smoky Mountains of Tennessee. This community is naturally rare, representing a tiny fraction of the high mountain landscape. It is known from only a few occurrences. Atmospheric deposition of air pollutants may have an adverse effect on these high elevation communities. It is a fragile community and can be damaged by trampling in areas of high recreational use.

DATABASE CODE Cegl004278

COMMENTS

Globally

Similar vegetation may range into the Black and Craggy Mountains of North Carolina but associated with a different geology.

Great Smoky Mountains National Park

In some areas this community may occur as a mosaic with *Rhododendron carolinianum* - *Rhododendron catawbiense* - *Leiophyllum buxifolium* Shrubland (CEGL007876). The vegetation of landslide scars on Mount Le Conte is included in this association, along with vegetation of more stable cliffs, ledges and seeps. The vegetation on the stable rocky substrates serves as a source pool for the more ephemeral scars, which revegetate slowly in a rather chaotic, stepwise succession, thus the different habitats are not compositionally distinct (J. Boetsch pers. comm.).

REFERENCES

Boetsch pers. comm., Feldcamp 1984, Wiser 1993, Wiser et al. 1996